



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,058	03/23/2004	Alain Yang	D0932-00411	4035

8933 7590 09/28/2007  
DUANE MORRIS, LLP  
IP DEPARTMENT  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103-4196

EXAMINER
----------

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
----------	--------------

1771

MAIL DATE	DELIVERY MODE
-----------	---------------

09/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,058	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> Norca L. Torres-Velazquez	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15-38, 41, 42 and 48-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-38, 41, 42 and 48-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 03, 2007 has been entered.

### ***Response to Amendment***

2. Claims 13-14, 39-40 and 43-47 have been canceled. Claims 1-12, 15-38, 41-42 and 48-53 are pending.

### ***Response to Arguments***

3. Applicant's arguments filed August 03, 2007 have been fully considered but they are not persuasive.

a. Applicants have amended the independent claims 1, 27 and 48 to now include the limitations of canceled claims 13 and 14. Applicants argue that the result of these limitations is that the textile glass fiber content of the insulation product is less than 6 to 10 wt% of the total insulation product and that in contrast, the insulation product the Brandon contains textile glass fiber contains textile glass fiber content of 10-30 wt%, which is Brandon's "optimum ratio" for blending wool and textile glass fibers produce the preferred embodiment of their insulation product. (Brandon at Col. 3, lines 1-13).

It is noted that BRANDON teaches that glass mats of their invention that contain a predetermined amount of wool fibers have better compressibility than all glass fiber mat containing only textile fibers. (Col. 2, lines 62-68) The reference teaches in their preferred embodiment, a glass mat that comprises approximately 70-90 wt% of the wool

fibers and approximately 10-30 wt% of the textile fibers. (Col. 3, lines 10-13) The reference further teaches that the wool content has an effect on the rigidity of the material and will also be influenced by the interactions between binder type and filament diameter. For example, for acrylic binder, rigidity is lowered by going to higher wool contents. (Refer to Col. 4, lines 3-26) Therefore, it is the Examiner's position that the content of wool fibers and accordingly, the content of the of the textile glass fibers in relation to the total glass fiber will vary depending on the properties aimed in the final product as well as the type of binder used. While the preferred embodiment teaches using approximately 10-30 wt% of the textile fibers, BRANDON et al. does not preclude variations in the content of these fibers (as shown above). It is the Examiner's conclusion that BRANDON et al. anticipates the claimed content of textile glass fibers as their range overlaps that of the claimed invention [when referring to approx. 10 wt%]. Further, it would have also been obvious to one having ordinary skill in the art to use textile glass fibers at a concentration of less than 10 wt% when a blend such as that taught by BRANDON et al. is used to achieve the predictable result of lower rigidity. *KSR International Co. v. Teleflex Inc.*, 550 U.S.-, 82 USPQ2D 1385 (2007).

***Claim Rejections - 35 USC § 102/103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 9, 11-12, 15 and 48-50 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over BRANDON et al. (US 4,849,281).

BRANDON et al. discloses a glass fibrous mat that includes a blend of fibers comprising approximately 70-90%, by weight 6.5-13.0 micron in diameter wool fiber and 1.0-15 mm in length; and approximately 10-30%, by weight, 7.5-13.5 micron in diameter, 1/8 to 1/2 inch [3.3-12 mm] in length textile glass fibers bonded together with a resin, binder material comprising a melamine cross-linked styrene-butadiene resin. (Abstract; Col. 2, lines 37-44) The reference further teaches that blends of textile and wool glasses, which contain polyester, polyamide [nylon is a polyamide] or polyaramid fibers or combinations of these can also be utilized to optimize mat textile and compressibility strengths to meet specific requirements. (Col. 2, lines 45-49) The reference teaches that wool fibers are shorter and finer than textile fibers. (Col. 2, lines 64-65)

The Examiner equates the blend including polyamide fibers to that of the present invention. Based on Applicants definition of the dimensions of the claimed textile glass fibers and the claimed rotary glass fibers, the Examiner equates the wool glass fibers of the prior art to the presently claimed rotary glass fibers and the textile fibers are similar to those of the present invention.

BRANDON further teaches that glass mats of their invention that contains a predetermined amount of wool fibers have better compressibility than all glass fiber mat containing only textile fibers. (Col. 2, lines 62-68) The reference teaches in their preferred embodiment, a glass mat that comprises approximately 70-90 wt% of the wool fibers and approximately 10-30 wt% of the textile fibers. (Col. 3, lines 10-13) The reference further teaches that the wool content has an effect on the rigidity of the material and will also be influenced by the interactions between binder type and filament diameter. For example, for

Art Unit: 1771

acrylic binder, rigidity is lowered by going to higher wool contents. (Refer to Col. 4, lines 3-26) Therefore, it is the Examiner's position that the content of wool fibers and accordingly the content of the of the textile glass fibers in relation to the total glass fiber will vary depending on the properties aimed in the final product as well as the type of binder used. While the preferred embodiment teaches using approximately 10-30 wt% of the textile fibers, BRANDON et al. does not preclude variations in the content of these fibers (as shown above). It is the Examiner's conclusion that BRANDON et al. anticipates the claimed content of textile glass fibers as their range overlaps that of the claimed invention [when referring to approx. 10 wt%]. Further, it would have also been obvious to one having ordinary skill in the art to use textile glass fibers at a concentration of less than 10 wt% when a blend such as that taught by BRANDON et al. is used to achieve the predictable result of lower rigidity. *KSR International Co. v. Teleflex Inc.*, 550 U.S.-, 82 USPQ2D 1385 (2007).

### ***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 5-7, 9-12, 15-24, 27, 31-33, 35-38, 41-42 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. (US 4,751,134) in view of BRANDON et al. (US 4,749,281).

CHENOWETH et al. discloses a nonwoven matrix of mineral fibers and man-made fibers that provides a rigid but resilient product having good strength and insulating characteristics. The matrix consists of glass fibers and synthetic fibers such as nylon, which have been shredded

Art Unit: 1771

and intimately combined with a thermosetting resin into a homogeneous mixture. The product may also include a skin on one or both faces thereof. (Abstract) Product densities in the range of from 1 to 50 pounds per cubic foot [ $16\text{-}800\text{ kg/m}^3$ ] are possible. (Col. 2, lines 34-35) The reference teaches that the glass fibers are preferably, substantially conventional virgin, rotary spun, fiberized glass fibers having a diameter in the range of from 3 to 10 microns with a length from approximately one half inch or less to approximately 3 inches. The synthetic fibers have lengths of from approx. one quarter inch to four inches and diameters of approximately 24 to 40 microns. (Col. 3, lines 35-66) The blanket will have a thickness of between about 1 and 3 inches. (Col. 4, lines 4-6) The resin teaches that the resin is in particle form. (Col. 4, lines 7-8)

CHENOWETH et al. fails to teach the inclusion of textile glass fibers as part of the total glass fiber content of their nonwoven.

BRANDON et al. discloses a glass fibrous mat that includes a blend of fibers comprising approximately 70-90%, by weight 6.5-13.0 micron in diameter wool fiber and 1.0-15 mm in length; and approximately 10-30%, by weight, 7.5-13.5 micron in diameter, 1/8 to 1/2 inch [3.3-12 mm] in length textile glass fibers bonded together with a resin, binder material comprising a melamine cross-linked styrene-butadiene resin. (Abstract; Col. 2, lines 37-44) The reference further teaches that blends of textile and wool glasses, which contain polyester, polyamide [nylon is a polyamide] or polyaramid fibers or combinations of these can also be utilized to optimize mat textile and compressibility strengths to meet specific requirements. (Col. 2, lines 45-49) The reference teaches that wool fibers are shorter and finer than textile fibers. (Col. 2, lines 64-65)

Art Unit: 1771

Since both references are directed to glass mats and the BRANDON et al. reference recognizes the inclusion of synthetic fibers to enhance the compressibility strength of the material the purpose disclosed by BRANDON et al. would have been recognized in the pertinent art of CHENOWETH et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the blend of CHENOWETH et al. and provide it with textile glass fibers at a concentration lower than that of the rotary glass fibers with the motivation of providing the material with more structural strength as the textile glass fibers do not bend as easily as rotary glass fibers. With regards to the dimensions of the textile glass fibers and the basis weight of the insulation product, it is the Examiner's position that it would have been obvious to one having ordinary skill in the art at the time of the invention to select the desired values for the textile glass fibers through the process of routine experimentation in order to arrive at values which offered the optimum insulation from the combination of CHENOWETH et al. and BRANDON et al.

8. Claims 2-4, 8, 28-30, 34 and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. and BRANDON et al. as applied above, and further in view of BARGO et al. (US 6,099,775).

CHENOWETH et al. and BRANDON et al. are silent to the use of scrap nylon fibers, scrap rotary fibers and scrap textile glass fibers.

BARGO et al. discloses a thermal and acoustical insulation product prepared from a mixture of from about 20-80% fiberglass, 1-30% scrap nylon of less than 0.25 inches [6 mm] in length and a 5-35% thermo-setting resin. (Abstract) The fiberglass fibers have a diameter of



Art Unit: 1771

from 5 to 20 microns and a length of from 0.25 to 5.00 inches [6-127mm]. The scrap nylon is less than 0.1875 inches in diameter [4.76 mm]. The reference further teaches that the resins may be in powder, latex, oil base or solvent base form, or they may be “liquid” polymers. The resin further teaches that the finished product will generally have a density of from 0.75-40 lbs/ft<sup>3</sup> [12-640 kg/m<sup>3</sup>]. (Col. 1, lines 60 bridging to Col. 2, lines 1-24) The reference teaches the importance of providing an inexpensive insulation product using recycled raw materials that are economical in cost to produce. (Col. 1, lines 51-53) Since the reference is also directed to an insulation produce, the purpose disclosed by BARGO et al. would have been recognized in the pertinent art of CHENOWETH et al. and BRANDON et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the insulation material and provide it with recycled raw materials with the motivation of producing an economical insulation product as taught above by BARGO et al.

9. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. and BRANDON et al. as applied above, and further in view of YANG et al. (US 2003/0049488).

YANG et al. teaches the use of a thermoplastic polymer binder in an amount of about 4 to 24% of the insulation product. (Page 2, [0021]) CHENOWETH et al. discloses the claimed invention except that it uses a thermosetting resin binder instead of a thermoplastic binder, YANG et al. shows that thermoplastic binder is an equivalent structure known in the art. Therefore, because these two materials are art-recognized equivalents materials in the art of glass insulation materials at the time the invention was made, one of ordinary skill in the art would

Art Unit: 1771

have found it obvious to substitute thermosetting for thermoplastic, particularly when the application does not require high temperatures.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 27 and 48 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 8 and 21 of copending Application No. 11/554,906. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application encompass the limitations of the present invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1771

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Norca L. Torres-Velazquez/  
Primary Examiner, Art Unit 1771

/N. L. T./  
September 27, 2007